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(12) United States Patent
Liechty, II**(10) Patent No.: US 6,306,053 B1****(45) Date of Patent: Oct. 23, 2001****(54) RAZOR-EDGED CUTTING TIP****(76) Inventor: Victor Jay Liechty, II, 1250 N. 1750 W., Provo, UT (US) 84604-2955****(*) Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.**(21) Appl. No.: 09/082,636****(22) Filed: May 21, 1998****(51) Int. Cl.⁷ F42B 6/08****(52) U.S. Cl. 473/583; 473/584****(58) Field of Search 473/583, 584****(56) References Cited****U.S. PATENT DOCUMENTS**

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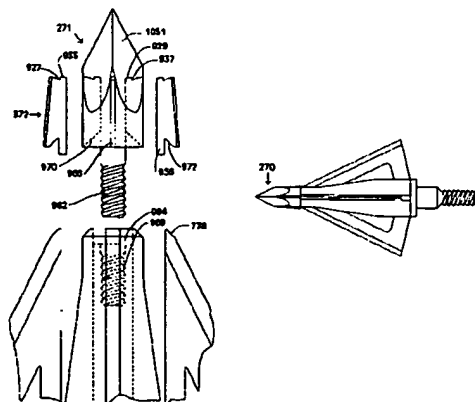
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Primary Examiner—John A. Ricci**(57) ABSTRACT**

Arrowheads each having a cutting tip defined with a tip body having at least one slot for engageable mounting of a cutting tip blade therein. The tip blades provide a razor sharp cutting edge situated near a forward leading end of the corresponding tips by holding elements. Some such cutting tips have facets formed thereon. Some such arrowheads are blade-opening arrowheads, whereas other such arrowheads have substantially removably attachable fixed blades disposed therewith, in elongately configured slots upon corresponding arrowhead bodies. The razor sharp cutting edges of the tip blades in conjunction with the corresponding tip bodies and/or facets provide cutting tips of structural integrity so as to sufficiently crush/split heavy bone and push penetrated material easily from its cutting path, while concomitantly slicing soft tissue with the ease of a razors edge.

67 Claims, 23 Drawing Sheets

BRIEF DESCRIPTION OF DRAWINGS